

Alcatel-Lucent 7710 SR SONET/SDH CMAs

COMPACT MEDIA ADAPTERS

With multirate SONET/SDH compact media adapters (CMAs), the Alcatel-Lucent 7710 Service Router (SR) provides the most modular, compact solution for smaller PoP, hub site and WAN connection applications for service providers, cable MSOs and enterprise customers.



Alcatel-Lucent 7710 SR

The Alcatel-Lucent 7710 SR is a feature-rich multiservice edge router available in modular, compact form factors. Designed for smaller points of presence (PoPs), hub sites and enterprise offices, the Alcatel-Lucent 7710 SR family gives service providers and cable multi-system operators (MSOs) a competitive edge by allowing them to right-size their infrastructure buildouts with a fully featured router in a smaller footprint. The Alcatel-Lucent 7710 SR family is also an ideal solution for enterprise customers in key vertical markets, such as government, utilities and transportation, that need to provide more secure, reliable and manageable data services for their end users.

The Alcatel-Lucent 7710 SR delivers the industry's richest, most comprehensive feature set available in a modular, compact carrier-class platform. The Alcatel-Lucent 7710 SR is a purpose-built multiservice edge router, designed and optimized for the delivery of high-performance carrier-class data, voice and video services. In two modular chassis sizes that support up to 4 or 12 interface cards, the Alcatel-Lucent 7710 SR offers a wide range of interface options using CMAs and selected media dependent adapters (MDAs), with unmatched service performance.

As a member of the industry-leading Alcatel-Lucent SR product portfolio, the Alcatel-Lucent 7710 SR family leverages the Alcatel-Lucent Service Router Operating System (SR OS). As such, it inherits the performance and reliability of Alcatel-Lucent's proven feature set, including non-stop routing and non-stop services, and meets service provider, cable MSO and enterprise requirements for IP/MPLS platforms that are future-safe for innovative, profitable service delivery.

Alcatel-Lucent 7710 SR CMAs

Alcatel-Lucent 7710 SR CMAs are small, hot-swappable interface modules that provide traffic interfaces in standard Alcatel-Lucent 7710 SR I/O positions. A CMA is a front-loading plug-in module that allows selection from a variety of interface speeds and types. The Alcatel-Lucent 7710 SR-c4 supports up to four CMAs, and the Alcatel-Lucent 7710 SR-c12 supports up to eight CMAs. Each CMA has a 1.5 Gb/s bidirectional connection to the control and forwarding module (CFM).

The Alcatel-Lucent 7710 SR provides unprecedented service richness and flexibility, with the capability to support any service over any interface. All Alcatel-Lucent 7710 SR service features, such as service-based hierarchical quality of service (H-QoS), accounting and filtering, as well as service-aware operational operations, administration and maintenance (OAM) tools, are available on all interfaces and subinterfaces. Service providers, cable MSOs and enterprise customers can provision access ports and IP or MPLS tunnels on any physical interface of any CMA, with no additional specialized hardware required. Table 1 lists CMA types and port densities for the Alcatel-Lucent 7710 SR family.

Alcatel-Lucent 7710 SR SONET/SDH CMAs

With multirate SONET/SDH compact media adapters (CMAs), the Alcatel-Lucent 7710 Service Router (SR) provides the most modular, compact solution for service providers, cable MSOs and enterprise customers' smaller PoP, hub site and WAN connection applications and offers highly available and flexible solutions for IP/MPLS edge consolidation.

The multirate SONET/SDH CMA hardware supports two OC-3c/OC-12c or STM-1c/STM-4c physical connections. SONET ports can be individually configured for either OC-3c or OC-12c operation. SDH ports can be individually configured for either STM-1c or STM-4c operation. The same 7750 SR OC-3c/STM-1c and OC-12c/STM-4c SFPs are supported to meet media type and distance requirements.

SONET/SDH CMAs provide:

- SONET or SDH framing (software selectable)
- Multirate OC-3c/OC-12c or STM-1c/STM-4c interface speeds (software selectable)
- APS protection can span CMAs, CMA and MDAs and multiple chassis
- Support for network or access mode
- Transmit clock is node timed and each port can enable or disable local line and internal loopbacks
- BCP null, BCP.1Q, IPCP, PPP auto, frame relay and WAN mirror encapsulations are supported
- Full array of path alarms are configurable to be either enabled or disabled
- Link holdover timers can be configured in 100ms increments to control link up and link down indications
- Line signal degradation bit error rate and line signal failure bit error rate thresholds are configurable

- Multimode and single-mode media types
- All ports use SFP optics for added flexibility and optimal slot utilization
- Optical link budget supporting distances up to 85 kilometers (52.8 miles)
- In-service removal and insertion

FEATURES

The multirate SONET/SDH CMAs support the full scope of the Alcatel-Lucent SR OS feature set, including:

- Flexible, high-performance IP/MPLS services:
 - BGP/MPLS virtual private network (VPN) (based on RFC 4364) and IP VPN services
 - dedicated Internet access services
 - virtual private LAN service (VPLS)
 - Ethernet virtual private wire service (VPWS)
 - frame relay VPWS
- High-performance IP and MPLS tunneling
- Rich MPLS multiservice transit capabilities
- Thousands of ingress/egress configurable access control lists (ACLs)
- Scalable BGP, open shortest path first (OSPF) and intermediate system-to-intermediate system (IS-IS) routing implementations with traffic-engineering extensions
- Per-service H-QoS
- Granular per-service accounting and billing
- Extensive OAM tools for service-aware troubleshooting and faster service activation

Table 1. Alcatel-Lucent 7710 SR CMA Types and Port Densities

CMA TYPE	PART NUMBER	INTERFACE SPEED	PORTS PER CMA	CONNECTOR TYPE	PORTS PER ALCATEL-LUCENT 7710 SR	
					SR-C4	SR-C12
10/100Base-T	3HE01022AA	10/100 Mb/s	8	RJ-45	32	64
1 Gigabit Ethernet	3HE01023AA	1 Gb/s	1	SFP	4	8
Channelized DS1/E1	3HE01020AA	1.5 Mb/s / 2.0 Mb/s	8	RJ-48c	32	64
DS3/E3	3HE01021AA	45 Mb/s / 34 Mb/s	4	1.0/2.3 BNC	16	32
SONET/SDH	3HE02185AA	OC-3c/OC-12c/STM-1c/STM-4c	2	SFP	8	16

PHYSICAL SPECIFICATIONS

Dimensions

- Height: 4.83 cm (1.9 in.)
- Width: 9.78 cm (3.85 in.)
- Depth: 29.85 cm (11.75 in.)
- Weight: 0.408 kg (0.9 lbs)

Environmental Specifications

- Operating temperature: 5 C to 40 C (41 F to 104 F)
- Relative humidity: 15% to 85% (non-condensing)
- Altitude: 1,800 m (5,906 ft)

Regulatory Agency Standards

- Safety: EN 60950-1; IEC 60950-1; EN 60825-1& 2; UL 60950-1; CSA 60950-1; AS/NZS 60950-1
- EMC: EN300 386; EN55022: EN55024; FCC Part15 Class A; IC ICES-003 Class A; AS/NZS CISPR22
- Telecom: ACTA TIA-968-A (USA); IC CS-03 (Canada); AS/NZS S016:2001 (Australia)

Regulatory Markings

- CE Mark (Europe); WEEE (Europe); A-Tick (Australia)

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